Part 2 describes the measures taken to promote S&T (science and technology; the same shall apply hereinafter) in FY 2011 in accordance with the 4th Science and Technology Basic Plan.

Chapter 1 Development of Science and Technology Policy

Section 1 The S&T Basic Plan

The S&T policy in Japan is promoted comprehensively in a planned manner, pursuant to the Basic Plan, which is determined every five years based on the "Science and Technology Basic Law" (Law No. 130, effective in 1995).

The world is now facing various issues on a global-scale, including threats to the environment, energy resources, food security, and the spread of infectious diseases. The GEJE is not only an unprecedented crisis in Japan, but also a global issue.

Each country needs to collaborate and cooperate in dealing with these global issues and Japan, as a developed country in science and technology, should take leadership to address these issues.

Under these circumstances, in the 4th Basic Plan, and after laying out five visions for the future of Japan in the form of major goals at which Japan should aim for through S&T policies, including 1) the "Realization of reconstruction and revival from the Earthquake" aimed at the strong reconstruction and revival of society after the GEJE, 2) the "Promotion of green innovation" focusing on the environment and energy, and 3) the "Promotion of life innovation" focusing on medical care, nursing care, and health. These have been established as the major pillars for the realization of growth and social development in Japan for years to come. Other issues to be addressed with equal importance are laid out as a "Key challenges to the priority issues facing Japan." Three basic principles for future S&T policies are laid out for achieving these issues; in concrete terms, efforts will be made for a shift from the existing area-focused prioritization to an issue-oriented prioritization, which is a system reform for promoting S&T innovation, and for the strategic development of international activities integrated with the world. In addition, the basic plan proposes coping with critical issues and, as an "inseparable" matter, proposes to promote the "enhancing basic research and human resource development" including 1) drastic enhancements of basic research based on a long-term perspective, 2) the development of human resources, such as young researchers leading future S&T, and 3) the formation of an international-standard research environment and foundation. Furthermore, based on the recognition that "development of policy created together with society" is important, while the public participation in these policies, S&T communication activities, and reformation of establishment of a promotion system for R&D are being promoted, with regard to an increase in investment in R&D, the Basic Plan clearly indicates it is aimed that the ratio of the total amount of public and private investment in R&D against GDP should be 4% or higher, the ratio of the governmental R&D expenditure against GDP should be 1%, and the total amount of the governmental R&D expenditure during the term of the 4th Basic Plan should be around 25 trillion yen. (This is a provisional calculation assuming the ratio of the governmental R&D expenditure against GDP is 1% and the average growth rate of nominal GDP is 2.8% during the term of the 4th Basic Plan.) (Figure 2-1-1)

Figure 2-1-1 / The 4th Science and Technology Basic Plan (2011 to 2015) Overview

I. Basic concept

1.The unprecedented crisis in Japan and changes in the world Considering the Great East Japan Earthquake as a global issue, the government must work deal with the earthquake and tsunain disaster by fully mobilizing every possible policy measus Furthermore, Japan and the world have been in the midst of upheaval politically, socially and economically, and the expected roles of science and technology (S&T) are also changing considerably in those circumstances.

- < Changes in the world>
 Surfacing of global-scale problems, and heating up of competition for natural resources, energy and food, etc.
 Economic rise of emerging nations, and the advance of economic globalization
 Changing innovation systems, and the evolution of brain circulation

2. Positioning of the Basic Plan The 4th Basic Plan is positioned as a basic policy for systematically and comprehensively promoting Japan's S&T policies, as a national strategy for the next five years, while giving greater depth and concrete form to the New Growth Strategy from a wide range of viewpoints and seeking greater coordination with other important policies.

III. Key challenges to the priority issues facing Japan

II. Realization of sustainable growth and societal development into the future

- I. Basic principle
 STI will be strategically promoted aiming at reconstruction and revival from the disaster and realizing sustainable growth and societal development into the future.
 B. Reconstruction and revival from the disaster
 Rebuilding and revival of industries in affected areas.
 Restoration and renewal of social infrastructure.
 Restoration of safe building and revival from the disaster
 Restoration of safe building and revival of industries in affected areas.
 Restoration of safe building and revival from the disaster
 Restoration of safe building and revival of industries
 Restoration of a stepsy supply and lower-carbon energy sources usage
 Restoration of a stepsy use in efficiency and smartness
 The promoting Life Innovation
 Development of new carbon technologies for social infrastructure
 System reforms directed at promoting STI
 Restoration of safe and highly effective medical treatment
 Type of the strategic carbon technologies (Strategy Councils (tentative name)"
 (i) Extablishment of "STI Strategy Councils (tentative name)"
 (ii) Extablishment of "STI Strategy Councils (tentative name)"
 (iii) Extablishment of strategy councils (tentative name)"
 (iii) Creation of new places to promote collaborations among industrial sector, academic

- (ii) Environment
 (iii) Creation of new places to promote collaborations among industrial sector, academic sector and government (Formation of centers of open innovation, etc.)
 (2) Building new systems for STI
 (i) Improvement of circumstances for strengthening of supports of commercialization
 (ii) Utilization of regulations and institutions to promote innovations
 (iii) Building of regional innovation systems
 (iv) Promotion of intellectual property strategies and international standardization strategies

Realization of a safe, affluent and high-quality life
 Enhancement of industrial competitiveness of Japan
 Contribution to the resolution of global problems
 Promoting fundamental R&D of the nation's existent

Priority issues to be addressed as a nation will be set, and the promoting measures aimed at

- 5) Enrichment and enhancement of common bases for S&T

achieving these issues will be focused on <u>2. Promoting measures for achieving the priority issues</u>

- 3. System reforms directed at achieving the priority issues
- (Promoting activities based on the promotion measures listed in II.5)

4. Strategic development of international activities

- (Promotion of R&D aimed at resolving common issues across Asia ("East Asian Science and Innovation Area (e-ASIA) Initiative.", etc.) 2) New developments in S&T diplomacy (i) Development of international activities capitalizing on Japan's strengths
- Promotion of international activities for advanced S&T Promotion of coordination and cooperation with developing countries for global-scale
- (iv) Reinforcement of foundations for developing international S&T activities

IV. Enhancing basic research and human resource development

- 1. Basic principle
 In addition to addressing the priority issues, initiatives also need to be enhanced for promoting basic research and human resource development
 2. Drastic enhancement of basic research
 (Further expansion of Grants-in-Ali dor Scientific Research, etc.)

 19. Drastic enhancement of contrast-in-Ali dor Scientific Research, etc.)

 11. Enhancement of World-class basic research
 (For there expansion of Grants-in-Ali dor Scientific Research, etc.)

 12. Development of S&T-related human resources

 13. Development of human resources that can be actively involved in a variety of places

 14. Development of new places to dialogue between industrial sector and academic sector, establishment of the "Guideline for Promotion of Granzation", etc.)
 13. Support for doctoral course students, and diversification of career paths

- (iii) Development and vocational training of engineers

- (iii) Development and vocational training of engineers
 ii) Development of creative and outstanding researchers
 (i) Creating fair and highly transparent evaluation systems
 (ii) Improving the career paths of researchers
 (iii) Promoting the active involvement of female researchers
 (iii) Developing the new generation for future S&T activities **4.** Formation of an international-standard research environment and foundations
 (i) Improving university facilities and public research institutions
 (i) Improving university facilities and equipment
 (ii) Promoting due dopment and shared use of advanced research facilities and equipment
 (ii) Improving the intellectual infrastructure
 (iii) Improving the research information infrastructure

V. Development of policy created together with society

- 1. Basic principle In order to achieve "policy for society and the public", initiatives need to be developed for gaining public understanding, trust and support

- gaming public understanding, trust and support 2. Decemping relationship between society and STI i) Promotion of STI policy based on the viewpoints of ordinary citizens (i) Encouraging public participation in policy planning and promotion (ii) Addressing ethical, legal and social issues (ELSI) (iii) Developing and securing human resources that link STI policy to society ii) Decemping of SeT communications existivity
- ii) Promotion of S&T communication activities
- 3. Promotion of effective STI policy
- i) Strengthening the policy planning and promotion function (establishment of the "STI Strategy Headquarters (tentative name)", etc.)
- ng and allocation

 ii) Enhancing the screening and allocation functions in the research funding programs

 Structural reform of research funds for the effective and efficient screening and all
 iii) Improvement and enrichment of the competitive fund systems

 iii) Enhancement of the R&D implementing system

 (i) A form of the R&D corporations
 (Establishment of new system for national R&D institutions)

 (ii) Improvements of systems for promoting research activities effectively

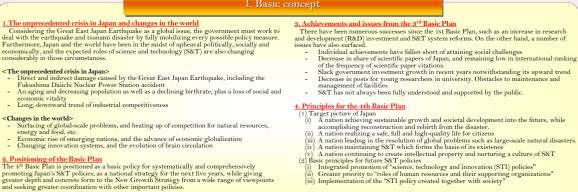
 (ii) Ensuring the effectiveness of the PDCA cycle

 (iii) Improvement and expansion of R&D evaluation systems

 Increasing the combined public-sector and private-sector R&D investment to over 4% of
 increasing the governmental R&D investment to 1% of GDP which will bring the total and
 of the governmental R&D investment to 25 trillion yen

 ent to over 4% of GDP.

Source: Created by Cabinet Office



t. Basic principle